

RECEIVED
CENTRAL FAX CENTER
OCT 13 2006

AMENDMENTS TO THE CLAIMS:

1. (Presently Amended) A process for making a thin film ZnO/Cu(InGa)Se₂ solar cell without depositing a buffer layer and by Zn doping from a vapor phase, comprising:
 - a) depositing Cu(InGa)Se₂ layer on a metal back contact deposited on a glass substrate;
 - b) heating the Cu(InGa)Se₂ layer on said metal back contact on said glass substrate to a temperature range between about 100°C to about 250°C;
 - c) subjecting the heated layer of Cu(InGa)Se₂ to an evaporant species from Zn acetate dihydrate to dope the Cu(InGa) Se₂ with Zn and form a ZnO deposit and etching with acetic acid in an amount of ~~about~~ 50% by volume in water to remove the ZnO deposit; and
 - d) sputter depositing ZnO on the Zn ~~compound~~ acetate dihydrate evaporant species treated layer of Cu(InGa)Se₂.
2. The process of claim 1 wherein said metal back contact is Mo.
3. (Cancelled)
4. (Cancelled)
5. (Presently Amended) The process of claim ~~3-2~~ wherein in step c) the heated layer of Cu(InGa)Se₂ is subjected to said evaporant species from said ~~compound~~ zinc acetate dihydrate under a vacuum.
6. (Presently amended) The process of claim ~~4-5~~ wherein the substrate temperature is about 100°C during said heating.
7. (Presently amended) The process of claim ~~4-5~~ wherein the substrate temperature is about 150°C during said heating.
8. (Presently amended) The process of claim ~~4-5~~ wherein the substrate temperature is about 200°C during said heating.
9. (Presently amended) The process of claim ~~4-5~~ wherein the substrate temperature is between 200°C and 250°C during said heating.
10. (Cancelled)

11. (Cancelled)
12. (Cancelled)
13. (Cancelled)
14. (Previously Presented) The process of claim 6 wherein, prior to sputter depositing ZnO in step d) an annealing step is performed at a temperature range from about 150°C to about 200°C.
15. (Previously Presented) The process of claim 7 wherein, prior to sputter depositing ZnO in step d) an annealing step is performed at a temperature range from about 150°C to about 200°C.
16. (Previously Presented) The process of claim 8 wherein, prior to sputter depositing ZnO in step d) an annealing step is performed at a temperature range from about 150°C to about 200°C.
17. (Previously Presented) The process of claim 9 wherein, prior to sputter depositing ZnO in step d) an annealing step is performed at a temperature range from about 150°C to about 200°C.
18. (Presently amended) A thin film ~~photovoltaic device~~ solar cell prepared by the process of claim 1 comprising a first layer of p-type Cu(InGa)Se₂ semiconductor having an n-type second layer of an evaporant species from zinc acetate dihydrate ~~a Zn compound that has been etched with acetic acid and sputter deposited with ZnO.~~
19. (Cancelled)